

### ABSTRACT OF THE DISCLOSURE

A pressure intensifier for fluids has an intensifier piston with a high-pressure piston and a low-pressure piston having a greater diameter than the high-pressure piston. The pistons are moveable in a high-pressure cylinder and a low-pressure cylinder, respectively, and move together. The high-pressure cylinder is connected to a high-pressure connection. A first control line is connected to a supply connector. A second control line is connected to a control valve having first and second switching positions. A first connection connects the control lines. The low-pressure cylinder is connected via the control valve in the first switching position to a supply connector and in the second switching position to a return connector. The switching positions are controlled by the intensifier piston. The intensifier piston opens or closes the first connection between the control lines. The first connection is arranged completely within a movement stroke of the high-pressure piston.